

Work Order ID 150148

Wednesday, August 24, 2016 11:41:53 AM

150148

Page 1

Item ID: D2281

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Jack Saddle

Start Date: 8/24/2016 Start Qty: 10.00

10

Cust Item ID:

Required Date: 8/31/2016 Req'd Qty: 10.00

10

Customer:

Reference:

DAS

21

9-89

Approvals: Process Plan: _____ Date: **AUG 24 2016**

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____

Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2281	Rev G								

100

0.00

100

FLOW WATER JET

Waterjet

Memo

0.41

FLOW CNC Waterjet

1-Cut as per Dwg D2281 Dwg Rev: G Prog Rev: G 2-
Deburr if necessary

(13)

08/16/08/28

110

0.00

110

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.02

Quality Control

(13)

08/16/08/28

120

0.00

120

QC8- Inspect parts - second check

QC

Memo

0.03

Quality Control

(13)

DAS
38
9-89
AUG 29 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval/Verification		
							QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

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N900040100

Setup

Start

NS1

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Required Date: 8/31/2016 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

130

Small Fab

Small Fab

0.00

Memo

0.14

Small Fab

Deburr

DAS
30
9-89

N/A

140

140

Brake NC

NC BRAKE

0.03

Memo

0.07

Brake NC

Form as per D2281 using D2281-T2

DAS
30
9-89

13

SEP 15 2016

150

150

QC

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.03

Quality Control

DAS
38
9-89

13

SEP 16 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER : _____			

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

Identify as per dwg & Stock Location: **WA1**

0.00

160

Packaging

Memo

0.02

Packaging

LOCATION : WA001

13**16.09.16****CPC**

170

QC21- Final Inspection - Work Order Release

0.00

170

QC

Memo

0.17

Quality Control

DAS
21
9-89

SEP 16 2016

rm 16/09/16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Picklist Print

Wednesday, August 24, 2016 11:41:56 AM

Page 1
1

Work Order ID: 150148

150148

Parent Item: D2281

D2281

Parent Item Name: Jack Saddle

Start Date: 8/24/2016

Required Date: 8/31/2016

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP Rev:A Removed from 9 Digit 05-12-02 JLM
IPP: rev B 06.07.17 waterjet EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S14GA		Purchased	No			100	sf	32.6158	0.125	1.31579			

M304S14GA

304SS sheet .080

ac 11/10/23

Location

Loc Qty

Loc Code

MAT019

20.8

M129972

5.7

M135061

15.1

TPI

11.815791

M134604

11.815791

1.7

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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OTHER : ☐																									

DART AEROSPACE LTD		Work Order: 150198
Description: Jack Saddle		Part Number: D2281
Inspection Dwg: D2281 Rev: G		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

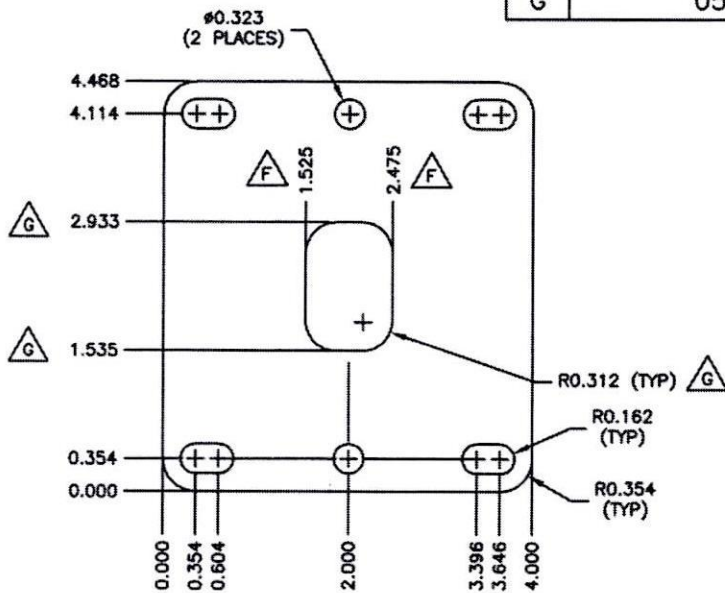
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
4.468	+/-0.010	4.473	'		V: D-02	
4.114	+/-0.010		'		Tap	
2.933	+/-0.010	2.936	'			
1.535	+/-0.010	1.541	'			
0.354	+/-0.010	.350	'			
0.354	+/-0.010	.355	'			
0.604	+/-0.010	.605	'			
2.000	+/-0.010	1.998	'			
3.396	+/-0.010	3.391	'			
3.646	+/-0.010	3.645	'			
4.000	+/-0.010	4.009	'			
1.525	+/-0.010	1.521	'			
2.475	+/-0.010	2.471	'			
Ø0.323	+0.006/-0.001	Ø.326	'			
0.080	+/-0.010	.073	'			

Measured by: 	Audited by: DAS 38	Prototype Approval:	N/A
Date: 16/09/28	Date: AUG 29 2016	Date:	N/A

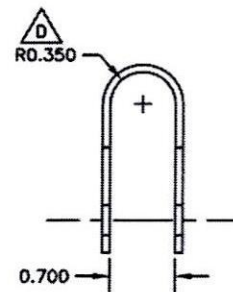
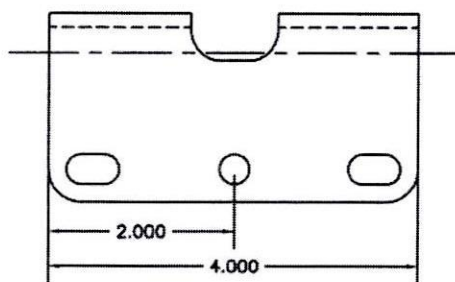
Rev	Date	Change	Revised by	Approved
A	06.09.08	New Issue	KJ/JLM 	

DART

DESIGN BW	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2281	REV. G SHEET 1 OF 1
DATE 05.06.07	TITLE JACK SADDLE		SCALE 1:2
A	94.10.14	NEW ISSUE	
B	94.10.18	DIMENSION WAS 2.878	
C	94.11.04	ADD TOOLING NOTCH	
D	98.03.27	R0.350 WAS R0.280	
E	04.11.18	REMOVE TOOLING NOTCHES	
F	05.03.16	REDESIGN FLAT PATTERN	
G	05.06.07	REDESIGN FLAT PATTERN	

RELEASED
[Signature]
05/08/11

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO 150148 MCS
16-08-14

**D2281 JACK SADDLE**

- 1) MATERIAL: 304/316 SS, 0.080 THICK (REF DART SPEC. M304S14GA)
- 2) FINISH: NONE
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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